IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 11-13, 37, 43-45 and 65 and CANCEL claims 3-10, 17-27, 32-36, 38-42, 46-48, 52-64 and 66-70 without prejudice or disclaimer of the subject matter recited therein in accordance with the following:

1. (Currently Amended) A multi-layer structure comprising:

a substrate; and

a transformation layer comprising a metal oxide layer formed on the substrate,

wherein a volume of a portion of the transformation layer irradiated by a laser beam changes when a temperature of the portion exceeds a predetermined temperature forming a ~~resist~~pit pattern on the multi-layer structure, the ~~resist~~pit pattern having a ~~size~~diameter smaller than a ~~diffraction limit~~diameter of the laser beam spot.

2. (Original) The multi-layer structure of claim 1, wherein the substrate is made from glass (SiO_2) or polycarbonate.

3-10. (Cancelled)

11. (Currently Amended) The multi-layer structure of ~~claim 10~~claim 1, wherein the metal oxide layer contains a transition metal or a noble metal.

12. (Currently Amended) The multi-layer structure of ~~claim 10~~claim 1, wherein the metal oxide layer is made from a material whose volume changes by releasing oxygen when heated.

13. (Currently Amended) The multi-layer structure of ~~claim 10~~claim 1, wherein the

transformation layer further comprises a dielectric layer sandwiched between the substrate and the metal oxide layer.

14. (Original) The multi-layer structure of claim 13, wherein the dielectric layer is made from $ZnS\text{-}SiO_2$

15. (Original) The multi-layer structure of claim 13, wherein the metal oxide layer is made of WO_x.

16. (Original) The multi-layer structure of claim 13, wherein the metal oxide layer has a thickness of about 80 nm.

17-27. (Cancelled)

28. (Original) The multi-layer structure of claim 1, wherein the transformation layer comprises:

a first dielectric layer formed on the substrate;

a metal oxide layer overlying the first dielectric layer; and

a second dielectric layer overlying the metal oxide layer.

29. (Original) The multi-layer structure of claim 28, wherein the metal oxide layer contains a transition metal or a noble metal.

30. (Original) The multi-layer structure of claim 29, wherein the noble metal is one of platinum oxide (PtO_x), silver oxide (AgO_x), palladium oxide (PdO_x), and tungsten oxide (WO_x).

31. (Original) The multi-layer structure of claim 28, wherein the metal oxide layer is made from a material whose volume changes by releasing oxygen when heated.

32-36. (Cancelled)

37. (Currently Amended) A master for manufacturing an optical disc, the master comprising:

a substrate; and

a transformation layer comprising a metal oxide layer formed on the substrate,

wherein a volume of a portion of the transformation layer irradiated by a laser beam changes when a temperature of the portion exceeds a predetermined temperature forming a ~~resist~~pit pattern on the master, the ~~resist~~pit pattern having a ~~size~~diameter smaller than a ~~diffraction limit~~diameter of the laser beam spot.

38-42. (Cancelled)

43. (Currently Amended) The master of claim 37~~claim 42~~, wherein the metal oxide layer contains a transition metal or a noble metal.

44. (Currently Amended) The master of claim 37~~claim 42~~, wherein the metal oxide layer is made from a material whose volume changes by releasing oxygen when heated.

45. (Currently Amended) The master of claim 37~~claim 42~~, wherein the transformation layer further comprises a dielectric layer sandwiched between the substrate and the metal oxide layer.

46-48. (Cancelled)

49. (Original) The master of claim 37, wherein the transformation layer comprises: a first dielectric layer formed on the substrate; a metal oxide layer overlying the first dielectric layer; and a second dielectric layer overlying the metal oxide layer.

50. (Original) The master of claim 49, wherein the metal oxide layer contains a transition metal or a noble metal.

51. (Original) The master of claim 49, wherein the metal oxide layer is made from a material whose volume changes by releasing oxygen when heated.

52-64. (Cancelled)

65. (Currently Amended) The multi-layer structure of ~~claim 10~~claim 1, wherein the metal oxide layer is formed directly on the substrate.

66-70. (Cancelled)